

Method for  
adhesively bonded

# ADHESIVELY BONDED LAMINATES AND COMPOSITE STRUCTURES

## CROSS-REFERENCE TO RELATED PATENT APPLICATIONS

This application claims the benefit of U.S. Provisional Patent Application No. 60/216,083, filed July 6, 2000.

## TECHNICAL FIELD OF THE INVENTION

This invention pertains to adhesive compositions and to composite structures prepared therefrom. In a preferred embodiment, the invention is directed towards a partition for a shipping vessel. The partition is composed of an adhesively bonded composite structure, which preferably is a laminar structure composed of two or more laminae.

## BACKGROUND OF THE INVENTION

Shipping containers and vessels, such as corrugated paper boxes, often require separator boards or partitions to separate the contents of the shipping vessel during transportation in order to protect against damage. Such partitions must be stiff and light in weight in order to provide maximum content protection and in order to minimize packaging cost and shipping weight. Typical separator boards in current use are made from paper products, such as linerboard, a heavy product made from cellulose fibers. Often, the separator boards are made as laminates of these linerboards, the plies of the laminates being held together with one of any number of adhesives currently known to bond cellulosic material together. Typical adhesives used in the construction of linerboard include, for instance, cooked starch, urea-formaldehyde resins, and melamine-formaldehyde resins. The combination of these single and multiple ply separator boards often is a significant portion of the weight of the shipping vessel and may increase shipping costs. In addition, the cost of the partition can contribute to the cost of the final packaged product owing to freight

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